## ABSTRACT

It is an object of the present invention to provide a novel mass spectrometry method which overcomes the conventional problems mentioned above, which can analyze at a high sensitivity and high accuracy a chemical reaction on a surface of a self-organized membrane bound to a metal, and which can be applied to analysis of structures of a sugar chain in future. According to the present invention, a method for performing mass spectrometry of sulfur atom-containing derivatives of an organic residue, characterized in that the method includes ionizing a metal-organic residue complex into the derivatives, wherein the complex has the organic residue bound through a sulfur atom to the metal is provided, thereby solving the above problems.

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